

ILLINOIS POLLUTION CONTROL BOARD

March 16, 2006

IN THE MATTER OF: )  
 )  
PROPOSED NEW 35 ILL. ADM. CODE 225 ) R06-25  
CONTROL OF EMISSIONS FROM LARGE ) (Rulemaking - Air)  
COMBUSTION SOURCES (MERCURY) )

Proposed Rule. First Notice.

OPINION AND ORDER OF THE BOARD (by G.T. Girard, A.S. Moore):

On March 14, 2006, the Illinois Environmental Protection Agency (Agency) filed this proposal for rulemaking (Prop.). The proposal is filed pursuant to Sections 9.10, 27, and 28.5 of the Environmental Protection Act (Act) (415 ILCS 5/9.10, 27, and 28 (2004)). The proposal addresses the control of emissions from coal-fired electric generating units beginning in July 2009.

The proposal indicates that the rulemaking is intended to meet certain obligations of the State under the federal Clean Air Act (42 U.S.C. § 7401 *et seq.*). More specifically, the proposal is brought to satisfy the State's obligation to submit a state implementation plan (SIP) to address the requirements of Clean Air Mercury Rule (CAMR) (*see* 70 Fed. Reg. 28606 (May 18, 2005)) and Section 9.10 of the Act. Prop. at 1, citing 415 ILCS 5/9/10 (2004). The proposal addresses serious deficiencies present in the CAMR including:

the unnecessary delay in achieving mercury emission reductions, the inherent concerns associated with a cap and trade program to control a persistent, bioaccumulative toxin, the inadequate mercury reductions contained in the CAMR, and the legal basis upon which CAMR was adopted. Prop. at 1.

This proposal was filed pursuant to Section 28.5 of the Act (415 ILCS 5/28.5 (2004)) and is accepted for hearing. Under the provisions of Section 28.5 of the Act (415 ILCS 5/28.5 (2004)), the Board is required to proceed within strict timeframes toward the adoption of the regulation. The Board has no discretion to amend or alter those set timeframes. The first of those strict timeframes is that the Board must "within 14 days of receipt of the proposal" file for first notice under the Illinois Administrative Procedure Act (5 ILCS 100/1-1 *et. seq.* (2004)). *See* 415 ILCS 5/28.5(f) (2004). The Board must also schedule all required hearings within that same 14 days. *Id.* Therefore, the Board today accepts the proposal without commenting on the merits of the proposal and sends the rule to first notice. In addition, the Board directs the hearing officer to expeditiously schedule all hearings in this proceeding. The following schedule<sup>1</sup> reflects the strict timeframes the Board must meet throughout this process:

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<sup>1</sup> This schedule includes the second hearing and potential third hearing. The second hearing will be held if any person requests the second hearing within 7 days after the first hearing. *See* 415 ILCS 5/28.5(g)(1) (2004). The third hearing will be cancelled if the Agency indicates to the



First Notice	on or before March 28, 2006 ( <i>see</i> 415 ILCS 5/28.5(f) (2004))
First Hearing	on or before May 8, 2006 ( <i>see</i> 415 ILCS 5/28.5(g) (2004))
Second Hearing	on or before June 7, 2006 ( <i>see</i> 415 ILCS 5/28.5(g) (2004))
Third Hearing	on or before June 21, 2006 ( <i>see</i> 415 ILCS 5/28.5(g) (2004))
Second Notice	July 22, 2006 or August 11, 2006 ( <i>see</i> 415 ILCS 5/28.5(o) (2004))
Final Filing	21 days after receipt of Joint Committee on Administrative Rules certificate of no objection ( <i>see</i> 415 ILCS 5/28.5(p) (2004))

In addition to the proposal, the Agency filed two motions. The first is a motion seeking a waiver of copy requirements. Specifically, the Agency seeks leave to file: (1) four complete copies and five partial copies of the proposal; (2) no copies of documents the Agency relied upon that are readily available to the Board or already in the Board's possession; (3) an original and four copies of the remaining documents the Agency relied upon; and (4) no copies of the materials the Agency incorporates by reference. The Board grants the motion and waives the requirement to file nine copies of the materials. The Board notes that the documents which the Agency seeks leave not to file are documents which are in the public domain and readily accessible to the Board and the public.

The second motion is a motion to hold the required hearings in Springfield. Due to the strict timeframes discussed above, the Board finds that material prejudice will result if the Board fails to rule on this motion today. *See* 35 Ill. Adm. Code 101.500(d). The Board notes that Section 102.304(f) allows the Board to hold hearings in Section 28.5 rulemakings in only one affected area of the State. *See* 35 Ill. Adm. Code 102.304(f). Further, the Board has scheduled and held hearings in only one area of the State. *See e.g., Amendments to New Source Review Rules, 35 Ill. Adm. Code 203, R92-21.* However, in this instance the Board finds that holding the hearings only in Springfield could inhibit participation. Therefore, the Board will hold at least one hearing in the Chicago area and per the Agency's request the first hearing will be scheduled in Chicago. The Board directs the hearing officer to schedule the hearings consistent with this order.

The Board notes that one change has been made to the text of the rulemaking, pursuant to 1 Ill. Adm. Code 100.340. Specifically, the Secretary of State's rules do not allow levels below the fourth level in rule language. Therefore, in Section 225.250(a)(3)(E)(i), the Board removed the roman numerals and spacing. Section 225.250(a)(3)(E)(i) is now one paragraph.

### **ORDER**

The Board directs the Clerk to cause the publication of the following rule for first notice in the *Illinois Register*.

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Board that the Agency will not introduce any additional materials. *See* 415 ILCS 5/28.5(g)(3) (2004). Hearings shall be continued day to day as necessary to complete the subject matter of the hearing.



TITLE 35: ENVIRONMENTAL PROTECTION  
 SUBTITLE B: AIR POLLUTION  
 CHAPTER I: POLLUTION CONTROL BOARD  
 SUBCHAPTER c: EMISSION STANDARDS AND LIMITATIONS FOR STATIONARY  
 SOURCES

PART 225  
 CONTROL OF EMISSIONS FROM LARGE COMBUSTION SOURCES

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225.295	Treatment of Mercury Allowances

AUTHORITY: Implementing Section 9.10 and authorized by Sections 27 and 28.5 of the Environmental Protection Act [415 ILCS 5/9.10, 27 and 28.5].

SOURCE: Adopted at \_\_ Ill. Reg. \_\_\_\_, effective \_\_\_\_\_.

SUBPART A: GENERAL PROVISIONS



## Section 225.100 Severability

If any Section, subsection or clause of this Part is found invalid, such finding shall not affect the validity of this Part as a whole or any Section, subsection or clause not found invalid.

## Section 225.120 Abbreviations and Acronyms

Unless otherwise specified within this Part, the abbreviations used in this Part shall be the same as those found in 35 Ill. Adm. Code 211. The following abbreviations and acronyms are used in this Part:

Act	Environmental Protection Act [415 ILCS 5/1 <i>et seq.</i> ]
Btu	British thermal unit
CAA	Clean Air Act [42 U.S.C. 7401 <i>et seq.</i> ]
CAAPP	Clean Air Act Permit Program
CO <sub>2</sub>	carbon dioxide
EGU	electric generating unit
GWh	gigawatt hour
hr	hour
lb	pound
MW	megawatt
MWe	megawatt electrical
MWh	megawatt hour
NO <sub>x</sub>	nitrogen oxides
O <sub>2</sub>	oxygen
RATA	relative accuracy test audit
SO <sub>2</sub>	sulfur dioxide
USEPA	United States Environmental Protection Agency

## Section 225.130 Definitions

The definitions contained in this Section apply only to the provisions of this Part. Unless otherwise defined herein and unless a different meaning of a term is clear from its context, the definitions of terms used in this Part shall have the meanings specified for those terms in 35 Ill. Adm. Code Part 211.

"Averaging demonstration" means, with regard to Subpart B of this Part, a demonstration of compliance that is based on the combined performance of EGUs at two or more sources.

"Boiler" means an enclosed fossil or other fuel-fired combustion device used to produce heat and to transfer heat to recirculating water, steam, or other medium.

"Bottoming-cycle cogeneration unit" means a cogeneration unit in which the energy input to the unit is first used to produce useful thermal energy and at least some of the reject



heat from the useful thermal energy application or process is then used for electricity production.

"Coal" means any solid fuel classified as anthracite, bituminous, subbituminous, or lignite by the American Society for Testing and Materials (ASTM) Standard Specification for Classification of Coals by Rank D388-77, 90, 91, 95, 98a, or 99 (Reapproved 2004).

"Coal-derived fuel" means any fuel (whether in a solid, liquid or gaseous state) produced by the mechanical, thermal, or chemical process.

"Coal-fired" means combusting any amount of coal or coal-derived fuel, alone or in combination with any amount of any other fuel, during a specified year.

"Cogeneration unit" means a stationary, fossil fuel-fired boiler or stationary, fossil fuel-fired combustion turbine:

Having equipment used to produce electricity and useful thermal energy for industrial, commercial, heating, or cooling purposes through the sequential use of energy; and

Producing during the 12-month period starting on the date the unit first produces electricity and during any calendar year after the calendar year in which the unit first produces electricity:

For a topping-cycle cogeneration unit,

Useful thermal energy not less than 5 percent of total energy output; and

Useful power that, when added to one-half of useful thermal energy produced, is not less than 42.5 percent of total energy input, if useful thermal energy produced is 15 percent or more of total energy output, or not less than 45 percent of total energy input, if useful thermal energy produced is less than 15 percent of total energy output.

For a bottoming-cycle cogeneration unit, useful power not less than 45 percent of total energy input.

"Combustion turbine" means

An enclosed device comprising a compressor, a combustor, and a turbine and in which the flue gas resulting from the combustion of fuel in the combustor passes through the turbine, rotating the turbine; and



If the enclosed device under the above paragraph of this definition is combined cycle, any associated heat recovery steam generator and steam turbine.

"Commence commercial operation" means, with regard to Subpart B of this Part, with regard to an Electric Generating Unit that serves a generator, to have begun to produce steam, gas, or other heated medium used to generate electricity for sale or use, including test generation. Such date shall remain the unit's date of commencement of operation even if the Electric Generating Unit is subsequently modified, reconstructed or repowered.

"Designated representative" means, with regard to Subpart B of this Part, the same as defined in 40 CFR 60.4102.

"Flue" means a conduit or duct through which gases or other matter is exhausted to the atmosphere.

"Gross electrical output" means the total electrical output from an Electric Generating Unit before making any deductions for energy output used in any way related to the production of energy. For an Electric Generating Unit generating only electricity, the gross electrical output is the output from the turbine/generator set.

"Input mercury" means the mass of mercury that is contained in the coal combusted within an Electric Generating Unit.

"Nameplate capacity" means, starting from the initial installation of a generator, the maximum electrical generating output (in MWe) that the generator is capable of producing on a steady-state basis and during continuous operation (when not restricted by seasonal or other deratings) as specified by the manufacturer of the generator or, starting from the completion of any subsequent physical change in the generator resulting in an increase in the maximum electrical generating output (in MWe) that the generator is capable of producing on a steady-state basis and during continuous operation (when not restricted by seasonal or other deratings), such increased maximum amount as specified by the person conducting the physical change.

"Output-based emission standard" means, with regard to Subpart B of this Part, a maximum allowable rate of emissions of mercury per unit of gross electrical output from an Electric Generating Unit.

"Repowered" means, with regard to an EGU, replacement of a coal-fired boiler with one of the following coal-fired technologies at the same source as the coal-fired boiler:

Atmospheric or pressurized fluidized bed combustion;

Integrated gasification combined cycle;

Magnetohydrodynamics;



Direct and indirect coal-fired turbines;

Integrated gasification fuel cells; or

As determined by the USEPA in consultation with the United States Department of Energy, a derivative of one or more of the technologies under this definition and any other coal-fired technology capable of controlling multiple combustion emissions simultaneously with improved boiler or generation efficiency and with significantly greater waste reduction relative to the performance of technology in widespread commercial use as of January 1, 2005.

"Rolling 12-month basis" means, with regard to Subpart B of this Part, a determination made on a monthly basis from the relevant data for a particular calendar month and the preceding 11 calendar months (total of 12 months of data), with two exceptions. For determinations involving one EGU, calendar months in which the EGU does not operate (zero EGU operating hours) shall not be included in the determination, and shall be replaced by a preceding month or months in which the EGU does operate, so that the determination is still based on 12 months of data. For determinations involving two or more EGUs, calendar months in which none of the EGUs covered by the determination operates (zero EGU operating hours) shall not be included in the determination, and shall be replaced by preceding months in which at least one of the EGU covered by the determination does operate, so that the determination is still based on 12 months of data.

#### Section 225.140      Incorporations by Reference

The following materials are incorporated by reference. These incorporations do not include any later amendments or editions.

- a) 40 CFR Part 60, § 60.17, § 60.45a, § 60.49a(k)(1), § 60.49a(p), § 60.50a(h), and §§ 60.4170 through 60.4176 (2005).
- b) 40 CFR Part 75 (2005).
- c) ASTM. American Society for Testing and Materials, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA, 19428-2959 (610) 832-9585:
  - 1) ASTM D388-77, 90, 91, 95, 98a, or 99, Classification of Coals by Rank (Reapproved 2004).
  - 2) ASTM D3173-03, Standard Test Method for Moisture in the Analysis Sample of Coal and Coke (Approved April 10, 2003).
  - 3) ASTM D3684-01, Standard Test Method for Total Mercury in Coal by the Oxygen Bomb Combustion/Atomic Absorption Method (Approved October 10, 2001).



- 4) ASTM D5865-04, Standard Test Method for Gross Calorific Value of Coal and Coke (Approved April 1, 2004).
- 5) ASTM D6414-01, Standard Test Method for Total Mercury in Coal and Coal Combustion Residues by Acid Extraction or Wet Oxidation/Cold Vapor Atomic Absorption (Approved October 10, 2001).
- 6) ASTM D6784-02, Standard Test Method for Elemental, Oxidized, Particle-Bound and Total Mercury in Flue Gas Generated from Coal-Fired Stationary Sources (Ontario Hydro Method) (Approved April 10, 2002).

## SUBPART B: CONTROL OF MERCURY EMISSIONS FROM COAL-FIRED ELECTRIC GENERATING UNITS

### Section 225.200 Purpose

The purpose of this Subpart is to control the emissions of mercury from coal-fired electrical generating units in Illinois.

### Section 225.202 Measurement Methods

Measurement of mercury shall be according to the following:

- a) Continuous emission monitoring pursuant to 40 CFR Part 75 (2005).
- b) ASTM D3173-03, Standard Test Method for Moisture in the Analysis Sample of Coal and Coke (Approved April 10, 2003).
- c) ASTM D3684-01, Standard Test Method for Total Mercury in Coal by the Oxygen Bomb Combustion/Atomic Absorption Method (Approved October 10, 2001).
- d) ASTM D5865-04, Standard Test Method for Gross Calorific Value of Coal and Coke (Approved April 1, 2004).
- e) ASTM D6414-01, Standard Test Method for Total Mercury in Coal and Coal Combustion Residues by Acid Extraction or Wet Oxidation/Cold Vapor Atomic Absorption (Approved October 10, 2001).
- f) ASTM D6784-02, Standard Test Method for Elemental, Oxidized, Particle-Bound and Total Mercury in Flue Gas Generated from Coal-Fired Stationary Sources (Ontario Hydro Method) (Approved April 10, 2002).

### Section 225.205 Applicability



The following stationary coal-fired boilers and stationary coal-fired combustion turbines are EGUs and are subject to this Subpart:

- a) Except as provided in subsection (b) of this Section, a unit serving at any time since the start-up of the unit's combustion chamber, a generator with nameplate capacity of more than 25 MWe producing electricity for sale.
- b) For a unit that qualifies as a cogeneration unit during the 12-month period starting on the date the unit first produces electricity and continues to qualify as a cogeneration unit, a cogeneration unit serving at any time a generator with nameplate capacity of more than 25 MWe and supplying in any calendar year more than one-third of the unit's potential electric output capacity or 219,000 MWh, whichever is greater, to any utility power distribution system for sale. If a unit qualifies as a cogeneration unit during the 12-month period starting on the date the unit first produces electricity but subsequently no longer qualifies as a cogeneration unit, the unit shall be subject to subsection (a) of this Section starting on the day on which the unit first no longer qualifies as a cogeneration unit.

#### Section 225.210 Compliance Requirements

##### a) Permit Requirements

The owner or operator of each source with one or more EGUs subject to this Subpart at the source must apply for a CAAPP permit that addresses the applicable requirements of this Subpart.

##### b) Monitoring Requirements

- 1) The owner or operator of each source and each EGU at the source must comply with the monitoring requirements of Sections 225.240 through 225.290 of this Subpart.
- 2) The compliance of each EGU with the mercury requirements under Sections 225.230 and 225.237 of this Subpart shall be determined by the emissions measurements recorded and reported in accordance with Sections 225.240 through 225.290 of this Subpart.

##### c) Mercury Emission Reduction Requirements

The owner or operator of any EGU subject to this Subpart shall comply with applicable requirements for control of mercury emissions under Section 225.230 or Section 225.237 of this Subpart.

##### d) Recordkeeping and Reporting Requirements



Unless otherwise provided, the owner or operator of a source with one or more EGUs at the source shall keep on site at the source each of the documents listed in subsections (d)(1) through (d)(3) of this Section for a period of five years from the date the document is created. This period may be extended for cause, at any time prior to the end of five years, in writing by the Agency.

- 1) All emissions monitoring information, in accordance with Sections 225.240 through 225.290 of this Subpart.
  - 2) Copies of all reports, compliance certifications, and other submissions and all records made or required or documents necessary to demonstrate compliance with the requirements of this Subpart.
  - 3) Copies of all documents used to complete a permit application and any other submission under this Subpart.
- e) Liability
- 1) The owner or operator of each source with one or more EGUs shall meet the requirements of this Subpart.
  - 2) Any provision of this Subpart that applies to a source shall also apply to the owner and operator of such source and to the owner and operator of each EGU at the source.
  - 3) Any provision of this Subpart that applies to an EGU shall also apply to the owner and operator of such EGU.
- f) Effect on Other Authorities. No provision of this Subpart shall be construed as exempting or excluding the owner and operator of a source or EGU from compliance with any other provision of an approved State Implementation Plan, a permit, the Act, or the CAA.

#### Section 225.220 Clean Air Act Permit Program (CAAPP) Permit Requirements

- a) Application Requirements
- 1) Each source with one or more EGUs subject to the requirements of this Subpart is required to submit a CAAPP permit application that addresses all applicable requirements of this Subpart, applicable to each EGU at the source.
  - 2) A) For EGUs that commenced commercial operation on or before December 31, 2008, the owner or operator of such EGUs must submit an initial permit application or application for



CAAPP permit modification that meets the requirements of this Section by December 31, 2008.

- B) For any EGU that commences commercial operation after December 31, 2008, the owner or operator of any such EGU must submit an initial CAAPP permit application or application for CAAPP modification that meets the requirements of this Section not later than 180 days before initial startup of the EGU unless the construction permit issued for the EGU addresses the requirements of this Subpart.

b) Contents of Permit Applications

In addition to other information required for a complete application for CAAPP permit or CAAPP permit modification, the application shall include the following information:

- 1) The ORIS (Office of Regulatory Information Systems) or facility code assigned to the source by the Energy Information Administration, if applicable.
- 2) Identification of each EGU at the source.
- 3) The intended approach to the monitoring requirements of Sections 225.240 through 225.290 of this Subpart.
- 4) The intended approach to the mercury emission reduction requirements of Section 225.230 or 225.237 of this Subpart, as applicable.

c) Permit Contents

- 1) Each CAAPP permit issued by the Agency for a source with one or more EGUs subject to the requirements of this Subpart shall contain federally enforceable conditions addressing all applicable requirements of this Subpart, which conditions shall be a complete and segregable portion of the source's entire CAAPP permit.
- 2) In addition to conditions related to the applicable requirements of this Subpart, each such CAAPP permit shall also contain the information specified under subsection (b) of this Section.

Section 225.230 Emission Standards for EGUs at Existing Sources

- a) 1) Beginning July 1, 2009, the owner or operator of a source with one



or more EGUs subject to this Subpart that commenced commercial operation on or before December 31, 2008, shall comply with one of the following standards for each EGU on a rolling 12-month basis:

- A) An emission standard of 0.0080 lb mercury/GWh gross electrical output; or
  - B) A minimum 90-percent reduction of input mercury.
- 2) For an EGU complying with subsection (a)(1)(A) of this Section, the actual mercury emission rate of the EGU for each 12-month rolling period, as monitored in accordance with this Subpart and calculated as follows, shall not exceed the applicable emission standard:

$$ER = \sum_{i=1}^{12} E_i \div \sum_{i=1}^{12} O_i$$

Where:

- $ER$  = Actual mercury emissions rate of the EGU for the particular 12-month rolling period, expressed in lb/GWh.
- $E_i$  = Actual mercury emissions of the EGU, in lbs, in an individual month in the 12-month rolling period, as determined in accordance with the emissions monitoring provisions of this Subpart.
- $O_i$  = Gross electrical output of the EGU, in GWh, in an individual month in the 12-month rolling period, as determined in accordance with Section 225.263 of this Subpart.

- 3) For an EGU complying with subsection (a)(1)(B) of this Section, the actual control efficiency for mercury emissions achieved by the EGU for each 12-month rolling period, as monitored in accordance with this Subpart and calculated as follows, shall meet or exceed the applicable efficiency requirement:

$$CE = 100 \times \{1 - (\sum_{i=1}^{12} E_i \div \sum_{i=1}^{12} I_i)\}$$

Where:

- $CE$  = Actual control efficiency for mercury emissions of the EGU for the particular 12-month rolling period, expressed as a percent.
- $E_i$  = Actual mercury emissions of the EGU, in lbs, in an individual month in the 12-month rolling period, as determined in accordance with the emissions monitoring provisions of this Subpart.



$I_i$  = Amount of mercury in the fuel fired in the EGU, in pounds, in an individual month in the 12-month rolling period, as determined in accordance with Section 225.265 of this Subpart.

- b) 1) As an alternative to compliance with one of the above emission standards in subsection (a) of this Section, the owner or operator of the EGU may comply with the emission standards of this Subpart by demonstrating that the actual emissions of mercury from the EGU are less than the allowable emissions of mercury from the EGU on a rolling 12-month basis.
- 2) For this purpose, for each rolling 12-month period, the actual emissions of mercury from the EGU, as monitored in accordance with this Subpart, must not exceed the allowable emissions of mercury from the EGU, as further provided by the following formulas:

$$E_{12} \leq A_{12}$$

$$E_{12} = \sum_{i=1}^{12} E_i$$

$$A_{12} = \sum_{i=1}^{12} A_i$$

Where:

$E_{12}$  = Actual mercury emissions of the EGU for the particular 12-month rolling period.

$A_{12}$  = Allowable mercury emissions of the EGU for the particular 12-month rolling period.

$E_i$  = Actual mercury emissions of the EGU in an individual month in the 12-month rolling period.

$A_i$  = Allowable mercury emissions of the EGU in an individual month in the 12-month rolling period, based on either the input mercury to the unit ( $A_{\text{Input } i}$ ) or the electrical output from the EGU ( $A_{\text{Output } i}$ ), as selected by the owner or operator of the EGU for that given month.

$A_{\text{Input } i}$  = Allowable mercury emissions of the EGU in an individual month based on the input mercury to the EGU, calculated as 10.0 percent (or 0.100) of the input mercury to the EGU.

$A_{\text{Output } i}$  = Allowable mercury emissions of the EGU in a particular month based on the electrical output from the EGU, calculated as the product of the output based mercury limit, i.e., 0.0080 lb/GWh, and the electrical output from the EGU, in GWh.

- 3) If the owner or operator of an EGU does not conduct the necessary sampling, analysis, and recordkeeping, in accordance with Section 225.265 of this Subpart, to determine the mercury input to the EGU, the



allowable emissions of the EGU must be calculated based on the electrical output of the EGU.

- c) If two or more EGUs are served by common stack(s) and the owner or operator conducts monitoring for mercury emissions in the common stack(s), as provided for by 40 CFR Part 75, Subpart I, such that the mercury emissions of each EGU are not determined separately, compliance of the EGUs with the applicable emission standards of this Subpart shall be determined as if the EGUs were a single EGU.
- d)
  - 1) As an alternative to compliance with the emission standards of subsection (a) of this Section, the owner or operator of a source with an EGU may comply with the emission standards of this Subpart by demonstrating that the actual emissions of mercury from all EGUs at the source are less than the allowable emissions of mercury from all EGUs at the source on a rolling 12-month basis.
  - 2) For this purpose, for each rolling 12-month period, the actual emissions of mercury from all the EGUs at the source, as monitored in accordance with this Subpart, must not exceed the sum of the allowable emissions of mercury from all the EGUs at the source, as further provided by the following formulas:

$$E_S \leq A_S$$

$$E_S = \sum_{i=1}^n E_i$$

$$A_S = \sum_{i=1}^n A_i$$

Where:

$E_S$  = Sum of the actual mercury emissions of the EGUs at the source.

$A_S$  = Sum of the allowable mercury emissions of the EGUs at the source.

$E_i$  = Actual mercury emissions of an individual EGU at the source, as determined in accordance with subsection (b)(2) of this Section.

$A_i$  = Allowable mercury emissions of an individual EGU at the source, as determined in accordance with subsection (b)(2) of this Section.

$n$  = Number of EGUs covered by the demonstration.

- 3) If an owner or operator of a source with two or more EGUs that is relying on this subsection to demonstrate compliance fails to meet the requirements of this subsection in a given 12-month rolling period, all EGUs at such source covered by the compliance demonstration are



considered out of compliance with the applicable emission standards of this Subpart for the entire last month of that period.

#### Section 225.232 Averaging Demonstrations for Existing Sources

- a) Through December 31, 2013, as an alternative to compliance with the emission standards of Section 225.230(a) of this Subpart, the owner or operator of an EGU may comply with the emission standards of this Subpart by means of an Averaging Demonstration (Demonstration) that shows that the actual emissions of mercury from the EGU and other EGUs at the source and other EGUs at other sources covered by the Demonstration are less than the allowable emissions of mercury from all EGUs covered by the Demonstration on a rolling 12-month basis.
- b) The EGUs at each source covered by a Demonstration must also comply with one of the following emission standards on a source-wide basis for the period covered by the Demonstration:
  - 1) An emission standard of 0.020 lb mercury/GWh gross electrical output; or
  - 2) A minimum 75-percent reduction of input mercury.
- c) For the purpose of this Section, compliance shall be determined using the equations in Section 225.230(a)(2), (a)(3), or (d)(2) of this Subpart, as applicable, addressing all EGUs at the sources covered by the Demonstration, rather than only EGUs at one source.
- d)
  - 1) The owners or operators of more than one existing source with EGUs can only participate in Demonstrations that include other existing sources that they own or operate.
  - 2)
    - i) The owner or operator of only a single existing source with EGUs (i.e., City, Water, Light & Power, City of Springfield, ID 167120AAO; Electric Energy, Inc., ID 127855AAC; Kincaid Generating Station, ID 021814AAB; and Southern Illinois Power Cooperative/Marion Generating Station, ID 199856AAC) can only participate in Demonstrations with other such owners or operators of a single existing source of EGUs.
    - ii) Participation in Demonstrations under this Section by the owner or operator of only a single existing source with EGUs must be authorized through federally enforceable permit conditions for each such source participating in the Demonstration.
- e) A source may be included in only one Demonstration during each rolling 12-month period.



- f) The owner or operator of EGUs using Demonstrations to show compliance with this Subpart must complete the determination of compliance for each 12-month rolling period no later than 60 days following the end of the period.
- g) If averaging is used to demonstrate compliance with this Subpart, the effect of a failure to demonstrate compliance shall be that the compliance status of each source shall be determined under Section 225.230 of this Subpart as if the sources were not covered by a Demonstration.
- h) For purposes of this Section, if the owner or operator of any source that participates in a Demonstration with an owner or operator of a source that does not maintain the required records, data, and reports for the EGUs at the source, or does not submit copies of such records, data, or reports to the Agency upon request, then the effect of this failure will be deemed to be a failure to demonstrate compliance and the compliance status of each source shall be determined under Section 225.230 of this Subpart as if the sources were not covered by a Demonstration.

Section 225.235      Units Scheduled for Permanent Shut Down

- a) The emission standards of Section 225.230(a) of this Subpart are not applicable to an EGU that will be permanently shut down as further specified below:
  - 1) The owner or operator of an EGU for which this Section is being relied upon shall by no later than June 30, 2009:
    - A) Have notified the Illinois EPA that it is planning to permanently shut down the EGU by the applicable date specified in subsection (a)(3) or (4) of this Section. This notification shall be accompanied by a description of the actions that have already been taken to allow the shut down of the EGU and a description of the future actions that must be accomplished to complete the shut down of the EGU, with the anticipated schedule for those actions and the anticipated date of permanent shutdown of the unit.
    - B) Have applied for a construction permit or be actively pursuing a federally enforceable agreement that requires the EGU to be permanently shut down in accordance with this Section.
    - C) Have applied for revisions to the operating permit(s) for the EGU to include provisions that terminate the authorization to operate the unit in accordance with this Section.
  - 2) The owner or operator of an EGU for which this Section is being relied upon shall by no later than June 30, 2010:



- A) Have obtained a construction permit or entered into a federally enforceable agreement as addressed by subsection (a)(1)(B) of this Section; or
  - B) Have obtained revised operating permit(s) in accordance with subsection (a)(1)(C) of this Section.
- 3) The plan for permanent shut down of the EGU must provide for the EGU to be permanently shut down by no later than the applicable date specified below:
  - A) If the owner or operator of the EGU is not constructing a new EGU or other generating units to specifically replace the existing EGU, by December 31, 2010.
  - B) If the owner or operator of the EGU is constructing a new EGU or other generating units to specifically replace the existing EGU, by December 31, 2011.
- 4) The owner or operator of the EGU must permanently shut down the EGU by the date specified in subsection (a)(3) of this Section, unless the owner or operator submits a demonstration to the Illinois EPA before such date showing that circumstances beyond its reasonable control (such as protracted delays in construction activity, unanticipated outage of another EGU, or protracted shakedown of a replacement unit) have occurred that interfere with the plan for permanent shut down of the EGU, in which case the date for shut down of the EGU may be extended as follows:
  - A) If the owner or operator of the EGU is not constructing a new EGU or other generating units to specifically replace the existing EGU, for up to one year, i.e., permanent shut down of the EGU to occur by no later than December 31, 2011.
  - B) If the owner or operator of the EGU is constructing a new EGU or other generating units to specifically replace the existing EGU, for up to 18 months, i.e., permanent shutdown of the EGU to occur by no later than June 30, 2013, provided, however, that after December 31, 2012, the existing EGU shall only operate as a back-up unit to address periods when the new generating units are not in service.
- b) Notwithstanding Sections 225.230 and 225.232 of this Subpart, any EGU that is not required to comply with Section 225.230 of this Subpart pursuant to this Section shall not be included when determining whether any other EGUs at the source or other sources are in compliance with Section 225.230 of this Subpart.



- c) If an EGU for which the owner or operator of the source has relied upon this Section in lieu of complying with Section 225.230(a) of this Subpart is not permanently shut down as required by this Section, the EGU shall be considered to be a new EGU subject to the emission standards in Section 225.237(a) of this Subpart beginning in the month after the EGU was required to be permanently shut down, in addition to any other penalties that may be imposed for failure to permanently shut down the EGU in accordance with this Section.

Section 225.237      Emission Standards for New Sources with EGUs

- a) 1) The owner or operator of a source with one or more EGUs, but that previously had not had any EGUs that commenced commercial operation before January 1, 2009, shall comply with one of the following emission standards for each EGU on a rolling 12-month basis:
  - A) An emission standard of 0.0080 lb mercury/GWh gross electrical output; or
  - B) A minimum 90-percent reduction of input mercury.
- 2) For this purpose, compliance may be demonstrated using the equations in Section 225.230(a)(2), (a)(3), or (b)(2) of this Subpart.
- b) The initial 12-month rolling period for which compliance with the emission standards of subsection (a)(1) of this Section must be demonstrated for a new EGU shall commence on the date that the initial performance test for the mercury emission standard under 40 CFR 60.45a also commences. The continuous emission monitoring systems required by this Subpart for mercury emissions from the EGU must be certified prior to this date. Thereafter, compliance shall be demonstrated on a rolling-12 month basis in terms of calendar months.

Section 225.240      General Monitoring and Reporting Requirements

The owner or operator of an EGU shall comply with the monitoring, recordkeeping, and reporting requirements as provided in this Section, Sections 225.250 through 225.290 of this Subpart, and Subpart I of 40 CFR Part 75. If the EGU utilizes a common stack with units that are not EGUs and the owner or operator of the EGU does not conduct emissions monitoring in the duct to the common stack from each EGU, the owner or operator of the EGU shall conduct emissions monitoring in accordance with 40 CFR 75.82(b)(2) and this Section, including monitoring in the duct to the common stack from each unit that is not an EGU, unless the owner or operator of the EGU counts the combined emissions measured at the common stack as the mass emissions of mercury for the EGUs for recordkeeping and compliance purposes.



- a) Requirements for installation, certification, and data accounting. The owner or operator of each EGU shall:
- 1) Install all monitoring systems required under this Section and Sections 225.250 through 225.290 of this Subpart for monitoring mercury mass emissions (including all systems required to monitor mercury concentration, stack gas moisture content, stack gas flow rate, and CO<sub>2</sub> or O<sub>2</sub> concentration, as applicable, in accordance with 40 CFR 75.81 and 75.82);
  - 2) Successfully complete all certification tests required under Section 225.250 and meet all other requirements of this Section, Sections 225.250 through 225.290 of this Subpart, and Subpart I of 40 CFR Part 75 applicable to the monitoring systems required under subsection (a)(1) of this Section; and
  - 3) Record, report, and quality-assure the data from the monitoring systems required under subsection (a)(1) of this Section.
  - 4) If the owner or operator elects to use the low mass emissions excepted monitoring methodology for an EGU that emits no more than 464 ounces (29 pounds) of mercury per year pursuant to 40 CFR 75.81(b), also perform emissions testing in accordance with 40 CFR 75.81(c) to demonstrate that the EGU is eligible to use this excepted emissions monitoring methodology as well as comply with all other applicable requirements of 40 CFR 75.81(b) through (f), and submit a copy of any information required to be submitted to the USEPA under these provisions to the Illinois EPA. The initial emissions testing to demonstrate eligibility of an EGU for the low mass emissions excepted methodology shall be conducted by the following dates:
    - A) If the EGU has commenced commercial operation before July 1, 2008, at least by January 1, 2009, or 45 days prior to relying on the low mass emissions excepted methodology, whichever date is later.
    - B) If the EGU has commenced commercial operation on or after July 1, 2008, at least 45 days prior to the applicable date specified under subsection (b)(2) of this Section or 45 days prior to relying on the low mass emissions excepted methodology, whichever date is later
- b) Emissions monitoring deadlines. The owner or operator shall meet the emissions monitoring system certification and other emissions monitoring requirements of subsections (a)(1) and (a)(2) of this Section on or before the following dates. The owner or operator shall record, report, and quality-assure the data from the



emissions monitoring systems required under subsection (a)(1) of this Section on and after the following dates:

- 1) For the owner or operator of an EGU that commences commercial operation before July 1, 2008, by January 1, 2009.
- 2) For the owner or operator of an EGU that commences commercial operation on or after July 1, 2008, by 90 unit operating days or 180 calendar days, whichever occurs first, after the date on which the EGU commences commercial operation.
- 3) For the owner or operator of an EGU for which construction of a new stack or flue or installation of add-on mercury emission controls, a flue gas desulfurization system, a selective catalytic reduction system, a fabric filter, or a compact hybrid particulate collector system is completed after the applicable deadline under subsection (b)(1) or (2) of this Section, by 90 unit operating days or 180 calendar days, whichever occurs first, after the date on which emissions first exit to the atmosphere through the new stack or flue, add-on mercury emissions controls, flue gas desulfurization system, selective catalytic reduction system, a fabric filter, or compact hybrid particulate collector system.

c) Reporting data

- 1) Except as provided in subsection (c)(2) of this Section, the owner or operator of an EGU that does not meet the applicable emissions monitoring date set forth in subsection (b) of this Section for any emissions monitoring system required under subsection (a)(1) of this Section shall, for each such monitoring system, determine, record, and report maximum potential (or, as appropriate, minimum potential) values for mercury concentration, stack gas flow rate, stack gas moisture content, and any other parameters required to determine mercury mass emissions in accordance with 40 CFR 75.80(g).
- 2) The owner or operator of an EGU that does not meet the applicable emissions monitoring date set forth in subsection (b)(3) of this Section for any emissions monitoring system required under subsection (a)(1) of this Section shall, for each such monitoring system, determine, record, and report substitute data using the applicable missing data procedures in 40 CFR 75.80(f), in lieu of the maximum potential (or, as appropriate, minimum potential) values, for a parameter if the owner or operator demonstrates that there is continuity between the data streams for that parameter before and after the construction or installation under subsection (b)(3) of this Section.

d) Prohibitions



- 1) No owner or operator of an EGU shall use any alternative emissions monitoring system, alternative reference method for measuring emissions, or any other alternative to the emissions monitoring and measurement requirements of this Section and Sections 225.250 through 225.290 of this Subpart, unless such alternative is promulgated by the USEPA and approved in writing by the Agency or the use of such alternative is approved in writing by the Agency and USEPA.
- 2) No owner or operator of an EGU shall operate the EGU so as to discharge, or allow to be discharged, mercury emissions to the atmosphere without accounting for all such emissions in accordance with the applicable provisions of this Section, Sections 225.250 through 225.290 of this Subpart, and Subpart I of 40 CFR Part 75.
- 3) No owner or operator of an EGU shall disrupt the continuous emission monitoring system, any portion thereof, or any other approved emission monitoring method, and thereby avoid monitoring and recording mercury mass emissions discharged into the atmosphere, except for periods of recertification or periods when calibration, quality assurance testing, or maintenance is performed in accordance with the applicable provisions of this Section, Sections 225.250 through 225.290 of this Subpart, and Subpart I of 40 CFR Part 75.
- 4) No owner or operator of an EGU shall retire or permanently discontinue use of the continuous emission monitoring system or any component thereof, or any other approved monitoring system under this Subpart, except under any one of the following circumstances:
  - A) The owner or operator is monitoring emissions from the EGU with another certified monitoring system that has been approved, in accordance with the applicable provisions of this Section, Sections 225.250 through 225.290 of this Subpart, and Subpart I of 40 CFR Part 75, by the Agency for use at that EGU and that provides emission data for the same pollutant or parameter as the retired or discontinued monitoring system; or
  - B) The owner or operator or designated representative submits notification of the date of certification testing of a replacement monitoring system for the retired or discontinued monitoring system in accordance with Section 225.250(a)(3)(A) of this Subpart.
- e) Long-term cold storage



The owner or operator of an EGU that is in long-term cold storage is subject to the applicable provisions of 40 CFR Part 75 for monitoring, recordkeeping, and reporting for units in long-term cold storage.

Section 225.250      Initial Certification and Recertification Procedures for Emissions Monitoring

- a) The owner or operator of an EGU shall comply with the following initial certification and recertification procedures for a continuous emissions monitoring system (i.e., a continuous emission monitoring system or an excepted monitoring system (sorbent trap monitoring system) under 40 CFR 75.15) required by Section 225.240(a)(1). The owner or operator of an EGU that qualifies for and for which the owner or operator elects to use the low mass emissions excepted methodology under 40 CFR 75.81(b) shall comply with the procedures in subsection (c) of this Section.
  - 1) Requirements for initial certification. The owner or operator of an EGU shall ensure that for each continuous emissions monitoring system required by Section 225.240(a)(1) of this Subpart (including the automated data acquisition and handling system) the owner or operator successfully completes all of the initial certification testing required under 40 CFR 75.80(d) by the applicable deadline in Section 225.240(b) of this Subpart. In addition, whenever the owner or operator of an EGU installs a monitoring system to meet the requirements of this Subpart in a location where no such monitoring system was previously installed, the owner or operator must successfully complete the initial certification requirements of 40 CFR 75.80(d).
  - 2) Requirements for recertification. Whenever the owner or operator of an EGU makes a replacement, modification, or change in any certified continuous emission monitoring system, or an excepted monitoring system (sorbent trap monitoring system) under 40 CFR 75.15, and required by Section 225.240(a)(1) of this Subpart, that may significantly affect the ability of the system to accurately measure or record mercury mass emissions or heat input rate or to meet the quality-assurance and quality-control requirements of 40 CFR 75.21 or Appendix B to 40 CFR Part 75, the owner or operator of an EGU shall recertify the monitoring system in accordance with 40 CFR 75.20(b). Furthermore, whenever the owner or operator of an EGU makes a replacement, modification, or change to the flue gas handling system or the EGU's operation that may significantly change the stack flow or concentration profile, the owner or operator shall recertify each continuous emission monitoring system, and each excepted monitoring system (sorbent trap monitoring system) under 40 CFR 75.15, whose accuracy is potentially affected by the change, all in accordance with 40 CFR 75.20(b). Examples of changes to a continuous emission monitoring system that require recertification include replacement of the



analyzer, complete replacement of an existing continuous emission monitoring system, or change in location or orientation of the sampling probe or site.

- 3) Approval process for initial certification and recertification. Subsections (a)(3)(A) through (D) of this Section apply to both initial certification and recertification of a continuous monitoring system required by Section 225.240(a)(1) of this Subpart. For recertifications, replace the words “certification” and “initial certification” with the word “recertification,” replace the word “certified” with the word “recertified,” and follow the procedures in 40 CFR 75.20(b)(5) in lieu of the procedures in subsection (a)(3)(E) of this Section.
  - A) Notification of certification. The owner or operator shall submit to the Agency, USEPA Region 5, and the Administrator of the USEPA written notice of the dates of certification testing, in accordance with Section 225.270 of this Subpart.
  - B) Certification application. The owner or operator shall submit to the Agency a certification application for each monitoring system. A complete certification application shall include the information specified in 40 CFR 75.63.
  - C) Provisional certification date. The provisional certification date for a monitoring system shall be determined in accordance with 40 CFR 75.20(a)(3). A provisionally certified monitoring system may be used under this Subpart for a period not to exceed 120 days after receipt by the Agency of the complete certification application for the monitoring system under subsection (a)(3)(B) of this Section. Data measured and recorded by the provisionally certified monitoring system, in accordance with the requirements of 40 CFR Part 75, will be considered valid quality-assured data (retroactive to the date and time of provisional certification), provided that the Agency does not invalidate the provisional certification by issuing a notice of disapproval within 120 days of the date of receipt by the Agency of the complete certification application.
  - D) Certification application approval process. The Agency will issue a written notice of approval or disapproval of the certification application to the owner or operator within 120 days of receipt of the complete certification application required by subsection (a)(3)(B) of this Section. In the event the Agency does not issue such a notice within such 120-day period, each monitoring system that meets the applicable performance requirements of 40 CFR



Part 75 and is included in the certification application will be deemed certified for use under this Subpart.

- i) Approval notice. If the certification application is complete and shows that each monitoring system meets the applicable performance requirements of 40 CFR Part 75, then the Agency will issue a written notice of approval of the certification application within 120 days of receipt.
  - ii) Incomplete application notice. If the certification application is not complete, then the Agency will issue a written notice of incompleteness that sets a reasonable date by which the owner or operator must submit the additional information required to complete the certification application. If the owner or operator does not comply with the notice of incompleteness by the specified date, then the Agency may issue a notice of disapproval under subsection (a)(3)(D)(iii) of this Section. The 120-day review period shall not begin before receipt of a complete certification application.
  - iii) Disapproval notice. If the certification application shows that any monitoring system does not meet the performance requirements of 40 CFR Part 75 or if the certification application is incomplete and the requirement for disapproval under subsection (a)(3)(D)(ii) of this Section is met, then the Agency will issue a written notice of disapproval of the certification application. Upon issuance of such notice of disapproval, the provisional certification is invalidated by the Agency and the data measured and recorded by each uncertified monitoring system shall not be considered valid quality-assured data beginning with the date and hour of provisional certification (as defined under 40 CFR 75.20(a)(3)). The owner or operator shall follow the procedures for loss of certification in subsection (a)(3)(E) of this Section for each monitoring system that is disapproved for initial certification.
  - iv) Audit decertification. The Agency may issue a notice of disapproval of the certification status of a monitor in accordance with Section 225.260(b) of this Subpart.
- E) Procedures for loss of certification. If the Agency issues a notice of disapproval of a certification application under subsection (a)(3)(D)(iii) of this Section or a notice of disapproval of



certification status under subsection (a)(3)(D)(iv) of this Section, then:

- i) The owner or operator shall substitute the following values, for each disapproved monitoring system, for each hour of EGU operation during the period of invalid data specified under 40 CFR 75.20(a)(4)(iii) or 75.21(e) and continuing until the applicable date and hour specified under 40 CFR 75.20(a)(5)(i). For a disapproved mercury pollutant concentration monitor and disapproved flow monitor, respectively, the maximum potential concentration of mercury and the maximum potential flow rate, as defined in Sections 2.1.7.1 and 2.1.4.1 of Appendix A to 40 CFR Part 75. For a disapproved moisture monitoring system and disapproved diluent gas monitoring system, respectively, the minimum potential moisture percentage and either the maximum potential CO<sub>2</sub> concentration or the minimum potential O<sub>2</sub> concentration (as applicable), as defined in Sections 2.1.5, 2.1.3.1, and 2.1.3.2 of Appendix A to 40 CFR Part 75. For a disapproved excepted monitoring system (sorbent trap monitoring system) under 40 CFR 75.15 and disapproved flow monitor, respectively, the maximum potential concentration of mercury and maximum potential flow rate, as defined in Sections 2.1.7.1 and 2.1.4.1 of Appendix A to 40 CFR Part 75.
  - ii) The owner or operator shall submit a notification of certification retest dates and a new certification application in accordance with subsections (a)(3)(A) and (B) of this Section.
  - iii) The owner or operator shall repeat all certification tests or other requirements that were failed by the monitoring system, as indicated in the Agency's notice of disapproval, no later than 30 unit operating days after the date of issuance of the notice of disapproval.
- b)
    - 1) If an emissions monitoring system has been previously certified in accordance with 40 CFR Part 75 and the applicable quality assurance and quality control requirements of 40 CFR 75.21 and Appendix B to 40 CFR Part 75 are fully met, the monitoring system shall be exempt from the initial certification requirements of this Section.
    - 2) The recertification provisions of this Section shall apply to an emissions monitoring system required by Section 225.240(a)(1) of this Subpart



exempt from initial certification requirements under subsection (a)(1) of this Section.

- c) Initial certification and recertification procedures for EGUs using the mercury low mass emissions excepted methodology under 40 CFR 75.81(b). The owner or operator of an EGU qualified to use the mercury low mass emissions excepted methodology under 40 CFR 75.81(b) shall meet the applicable certification and recertification requirements in 40 CFR 75.81(c) through (f).
- d) Certification Applications. The owner or operator of an EGU shall submit an application to the Agency within 45 days after completing all initial certification or recertification tests required under this Section, including the information required under 40 CFR 75.63.

#### Section 225.260 Out of Control Periods for Emission Monitors

- a) Whenever any emissions monitoring system fails to meet the quality-assurance and quality-control requirements or data validation requirements of 40 CFR Part 75, data shall be substituted using the applicable missing data procedures in Subparts D and I of 40 CFR Part 75.
- b) Audit decertification. Whenever both an audit of an emissions monitoring system and a review of the initial certification or recertification application reveal that any emissions monitoring system should not have been certified or recertified because it did not meet a particular performance specification or other requirement under Section 225.250 of this Subpart or the applicable provisions of 40 CFR Part 75, both at the time of the initial certification or recertification application submission and at the time of the audit, the Agency will issue a notice of disapproval of the certification status of such monitoring system. For the purposes of this subsection, an audit shall be either a field audit or an audit of any information submitted to the Agency. By issuing the notice of disapproval, the Agency revokes prospectively the certification status of the emissions monitoring system. The data measured and recorded by the monitoring system shall not be considered valid quality-assured data from the date of issuance of the notification of the revoked certification status until the date and time that the owner or operator completes subsequently approved initial certification or recertification tests for the monitoring system. The owner or operator shall follow the applicable initial certification or recertification procedures in Section 225.250 of this Subpart for each disapproved monitoring system.

#### Section 225.261 Additional Requirements to Provide Heat Input Data

The owner or operator of an EGU that monitors and reports mercury mass emissions using a mercury concentration monitoring system and a flow monitoring system shall also monitor and report heat input rate at the EGU level using the procedures set forth in 40 CFR Part 75.



## Section 225.263      Monitoring of Gross Electrical Output

The owner or operator of an EGU complying with this Subpart by means of Section 225.230(a)(1) or using electrical output ( $O_i$ ) and complying by means of Section 225.230(b) or (d) or Section 225.232 of this Subpart shall monitor gross electrical output of the associated generator(s) in MWh on an hourly basis.

## Section 225.265      Coal Analysis for Input Mercury Levels

- a) The owner or operator of an EGU complying with this Subpart by means of Section 225.230(a)(2) or using input mercury levels ( $I_i$ ) and complying by means of Section 225.230(b) or (d) or Section 225.232 of this Subpart shall:
  - 1) Perform daily sampling of the coal combusted in the EGU for mercury content. The owner or operator of such EGU shall collect a minimum of one 2-lb grab sample per day of operation from the belt feeders anywhere between the crusher house or breaker building and the boiler. Such sample shall be taken in such a manner so as to provide a representative mercury content for the coal burned on that day.
  - 2) Analyze the grab coal sample for the following:
    - A) Determine the heat content using ASTM D5865-04 or equivalent approved in writing by the Agency.
    - B) Determine the moisture content using ASTM D3173-03 or equivalent approved in writing by the Agency.
    - C) Measure the mercury content using ASTM D6414-01, ASTM D3684-01, or equivalent approved in writing by the Agency.
  - 3) The owner or operator of multiple EGUs at the same source using the same crusher house or breaker building may take one sample per crusher house or breaker building, rather than one per EGU.
  - 4) The owner or operator of an EGU shall use the data analyzed under subsection (b) of this Section to determine the mercury content in terms of lbs/trillion Btu.
- b) The owner or operator of an EGU that must conduct sampling and analysis of coal pursuant to subsection (a) of this Section, shall begin such activity by the following date:
  - 1) If the EGU is in daily service, at least 30 days before the start of the month for which such activity will be required.



- 2) If the EGU is not in daily service, on the day that the EGU resumes operation.

Section 225.270      Notifications

The owner or operator of a source with one or more EGUs shall submit written notice to the Agency according to the provisions in 40 CFR 75.61 for each EGU or group of EGUs monitored at a common stack and each non-EGU monitored under 40 CFR 75.82(b)(2)(ii).

Section 225.290      Recordkeeping and Reporting

a)      General provisions.

- 1) The owner or operator of an EGU and its designated representative shall comply with all applicable recordkeeping and reporting requirements in this Section and with all applicable recordkeeping and reporting requirements of 40 CFR 75.84.
- 2) The owner or operator of an EGU shall maintain records for each month identifying the emission standard in Section 225.230(a) or 225.237(a) of this Section with which it is complying or which is applicable for the EGU and the following records related to the emissions of mercury that the EGU is allowed to emit:
  - A) For an EGU for which the owner or operator is complying with this Subpart by means of Section 225.230(a)(2) or 225.237(a)(1)(B) or using input mercury levels to determine the allowable emissions of the EGU, records of the daily mercury content of coal used (lbs/trillion Btu) and the daily and monthly input mercury (lbs), which shall be kept in the file required under 40 CFR 75.84(a).
  - B) For an EGU for which the owner or operator of an EGU complying with this Subpart by means of Section 225.230(a)(1) or 225.237(a)(1)(A) or using electrical output to determine the allowable emissions of the EGU, records of the daily and monthly gross electrical output (GWh), which shall be kept in the file required under 40 CFR 75.84(a).
- 3) The owner or operator of an EGU shall maintain records of the following for each EGU:
  - A) Monthly emissions of mercury from the EGU.



- B) For an EGU for which the owner or operator is complying by means of Section 225.230(b) or (d) of this Subpart, records of the monthly allowable emissions of mercury from the EGU.
- 4) The owner or operator of an EGU that is participating in an Averaging Demonstration pursuant to Section 225.232 of this Subpart shall maintain records identifying all sources and EGUs covered by the Demonstration for each month and, within 60 days of the end of each calendar month, calculate and record the actual and allowable mercury emissions of the EGU for the month and the applicable 12-month rolling period.
- 5) The owner or operator of an EGU shall maintain the following records related to quality assurance activities conducted for emissions monitoring systems:
  - A) The results of quarterly assessments conducted under Section 2.2 of Appendix B of 40 CFR Part 75; and
  - B) Daily/weekly system integrity checks under Section 2.6 of Appendix B of 40 CFR Part 75.
- 6) The owner or operator of an EGU shall maintain an electronic copy of all electronic submittals to the USEPA under 40 CFR 75.84(f).
- 7) The owner or operator of an EGU shall retain all records required by this Section at the source unless otherwise provided in the CAAPP permit issued for the source and shall make a copy of any record available to the Agency upon request.
- b) Quarterly reports. The owner or operator of a source with one or more EGUs shall submit quarterly reports to the Agency as follows:
  - 1) These reports shall include the following information for operation of the EGUs during the quarter:
    - A) The total operating hours of each EGU and the mercury CEMS, as also reported in accordance with 40 CFR Part 75.
    - B) A discussion of any significant changes in the measures used to control emissions of mercury from the EGUs or the coal supply to the EGUs, including changes in the source of coal.
    - C) Summary information on the performance of the mercury CEMS. When the mercury CEMS was not inoperative, repaired, or adjusted, except for routine zero and span checks, this shall be stated in the report.



- D) If the CEMS downtime was more than 5.0 percent of the total operating time for the EGU: the date and time identifying each period during which the CEMS was inoperative, except for routine zero and span checks; the nature of CEMS repairs or adjustments and a summary of quality assurance data consistent with 40 CFR Part 75, i.e., the dates and results of the Linearity Test(s) and any Relative Accuracy Test Audit(s) during the quarter; a listing of any days when a required daily calibration was not performed; and the date and duration of any periods when the CEMS was out-of-control as addressed by Section 225.260 of this Subpart.
  - 2) The owner or operator shall submit each quarterly report to the Agency within 45 days following the end of the calendar quarter covered by the report.
- c) Compliance certification. The owner or operator of a source with one or more EGUs shall submit to the Agency a compliance certification in support of each quarterly report based on reasonable inquiry of those persons with primary responsibility for ensuring that all of the EGUs' emissions are correctly and fully monitored. The certification shall state that:
  - 1) The monitoring data submitted were recorded in accordance with the applicable requirements of this Section, Sections 225.240 through 225.270, and Section 225.290 of this Subpart, and 40 CFR Part 75, including the quality assurance procedures and specifications; and
  - 2) For an EGU with add-on mercury emission controls, a flue gas desulfurization system, a selective catalytic reduction system, or a compact hybrid particulate collector system and for all hours where mercury data are substituted in accordance with 40 CFR 75.34(a)(1):
    - (A)(i) The mercury add-on emission controls, flue gas desulfurization system, selective catalytic reduction system, or compact hybrid particulate collector system were operating within the range of parameters listed in the quality assurance/quality control program under Appendix B to 40 CFR Part 75; or
    - ii) With regard to a flue gas desulfurization system or a selective catalytic reduction system, quality-assured SO<sub>2</sub> emission data recorded in accordance with 40 CFR Part 75 document that the flue gas desulfurization system was operating properly, or quality-assured NO<sub>x</sub> emission data recorded in accordance with 40 CFR Part 75 document that the selective catalytic reduction system, was operating properly, as applicable; and



- B) The substitute data values do not systematically underestimate mercury emissions.

d) Annual Certification of Compliance

- 1) The owner or operator of a source with one or more EGUs subject to this Subpart shall submit to the Agency an Annual Certification of Compliance with this Subpart no later than May 1 of each year and shall address compliance for the previous calendar year. Such certification shall be submitted to the Agency, Air Compliance and Enforcement Section, and the Air Regional Field Office.
- 2) Annual Certifications of Compliance shall indicate whether compliance existed for each EGU for each month in the year covered by the Certification and certification to that effect. In addition, for each EGU, the owner or operator shall provide the following:
  - A) If complying with this Subpart by means of Section 225.230(a)(1)(A) or 225.237(a)(1)(A):
    - i) Actual emissions rate, in lb/GWh, for each 12-month rolling period ending in the year covered by the Certification;
    - ii) Actual emissions, in lbs, and gross electrical output, in GWh, for each 12-month rolling period ending in the year covered by the Certification; and
    - iii) Actual emissions, in lbs, and gross electrical output, in GWh, for each month in the year covered by the Certification and in the previous year.
  - B) If complying with this Subpart by means of Section 225.230(a)(1)(B) or 225.237(a)(1)(B):
    - i) Actual control efficiency for emissions for each 12-month rolling period ending in the year covered by the Certification, expressed as a percent;
    - ii) Actual emissions, in lbs, and mercury content in the fuel fired in such EGU, in lbs, for each 12-month rolling period ending in the year covered by the Certification; and
    - iii) Actual emissions, in lbs, and mercury content in the fuel fired in such EGU, in lbs, for each month in the year covered by the Certification and in the previous year.



- C) If complying with this Subpart by means of Section 225.230(b):
    - i) Actual emissions and allowable emissions for each 12-month rolling period ending in the year covered by the Certification; and
    - ii) Actual emissions and allowable emissions, and which standard of compliance the owner or operator was utilizing for each month in the year covered by the Certification and in the previous year.
  - D) If complying with this Subpart by means of Section 225.230(d):
    - i) Actual emissions and allowable emissions for all EGUs at the source for each 12-month rolling period ending in the year covered by the Certification; and
    - ii) Actual emissions and allowable emissions, and which standard of compliance the owner or operator was utilizing for each month in the year covered by the Certification and in the previous year.
  - E) If complying with this Subpart by means of Section 225.232:
    - i) Actual emissions and allowable emissions for all EGUs at the source in an Averaging Demonstration for each 12-month rolling period ending in the year covered by the Certification; and
    - ii) Actual emissions and allowable emissions, with the standard of compliance the owner or operator was utilizing for each EGU at the source in an Averaging Demonstration for each month for all EGUs at the source in an Averaging Demonstration in the year covered by the Certification and in the previous year.
  - F) Any deviations, data substitutions, or exceptions each month and discussion of the reasons for such deviations, data substitutions, or exceptions.
- 3) All Annual Certifications of Compliance required to be submitted shall include the following certification by a responsible official:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system



designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

- 4) The owner or operator of an EGU shall submit its first Annual Certification of Compliance to address calendar year 2009 or the calendar year in which the EGU commences commercial operation, whichever is later. Notwithstanding subsection (d)(2) of this Section, in the Annual Certifications of Compliance that are required to be submitted by May 1, 2010, and May 1, 2011, to address calendar years 2009 and 2010, respectively, the owner or operator is not required to provide 12-month rolling data for any period that ends before June 30, 2010.
- e) Deviation reports. For each EGU, the owner or operator shall promptly notify the Agency of deviations from requirements of this Subpart. At a minimum, these notifications shall include a description of such deviations within 30 days of discovery of the deviations, and a discussion of the possible cause of such deviations, any corrective actions, and any preventative measures taken.
- f) Quality assurance RATA reports. The owner or operator of an EGU shall submit to the Agency, Air Compliance and Enforcement Section, the quality assurance RATA report for each EGU or group of EGUs monitored at a common stack and each non-EGU under 40 CFR 75.82(b)(2)(ii) within 45 days after completing a quality assurance RATA.

#### Section 225.295 Treatment of Mercury Allowances

Any mercury allowances allocated to the Agency by the USEPA shall be treated as follows:

- a) No such allowances shall be allocated to any owner or operator of an EGU or other sources of mercury emissions into the atmosphere or discharges into the waters of the State.
- b) The Agency shall hold all allowances allocated by the USEPA to the State. At the end of each calendar year, the Agency shall instruct the USEPA to retire permanently all such allowances.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, certify that the Board adopted the above opinion and order on March 16, 2006, by a vote of \_\_\_\_\_.

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Dorothy M. Gunn, Clerk



Illinois Pollution Control Board